UNSW SYDNEY

UNSW Engineering

Education Specification

1. Program Overview

Program Title: Bachelor of Engineering (Honours)

Award Title: Bachelor of Engineering (Honours) (Environmental Engineering)

Engineering Discipline: Environmental Engineering

The Environmental Engineering program at UNSW is designed to meet the Engineers Australia Stage 1 Competency Standard by cultivating graduates who demonstrate strong foundational knowledge, practical application and professional responsibility. The curriculum integrates core scientific and engineering principles with real-world environmental challenges, ensuring students develop competence in areas such as water and wastewater treatment, environmental remediation, and sustainable infrastructure. Through project-based learning, industry engagement, and interdisciplinary collaboration, students build capabilities in problem-solving, communication, and ethical decision-making, which are key elements of the Stage 1 competencies. The program also develops lifelong learning and adaptability, preparing graduates to contribute meaningfully to the engineering profession and society.

2. Career Alignment

There is a strong and growing demand for Environmental Engineering graduates both in Australia and globally. According to the World Economic Forum's *Future of Jobs Report 2025*, Environmental Engineering ranks as the 12th fastest-growing profession worldwide. This reflects the increasing urgency of addressing climate change, environmental degradation, and the transition to sustainable technologies and practices.

In Australia, employment opportunities for Environmental Engineering graduates are largely driven by climate change mitigation and adaptation, the green transition, and a heightened focus on environmental stewardship. Graduates are well-positioned to contribute to sectors such as water and wastewater management, sustainable infrastructure, and environmental policy.

Major engineering consultancies – including ARUP, Jacobs, AECOM, and GHD – are among the leading employers, offering graduate roles that span design, advisory, and implementation services. The public sector also plays a significant role, with water utilities and government agencies actively recruiting environmental engineers to support regulatory compliance, infrastructure planning, and sustainability initiatives. Additionally, a vibrant ecosystem of start-ups is emerging, particularly in the sustainability and clean-tech space, offering innovative and entrepreneurial career pathways.

The Environmental Engineering specialisation at UNSW is designed to prepare students for these diverse opportunities by equipping them with the technical expertise, systems thinking, lifelong learning and professional skills required to thrive in a rapidly evolving industry.

3. Specialisation Framework

Initial development of the Specialisation Learning Outcomes (SLOs) involved a working party consisting of most of the staff teaching into the Environmental Engineering specific courses of the specialisation. The draft was then presented to the School Teaching and Learning Committee (TLC) for discussion. This discussion included student opinion collected from representatives of the Civil and Environmental Engineering Student Society (CEVSOC). After including amendments from TLC, the draft was presented to the School Management Committee (SMC) for discussion. After approval from the SMC the draft was submitted to the Industry Advisory Committee (IAC) for comment.

The final set of suggested improvements were received from the Faculty Accreditation Working Group (FAWG). The final version of the SLOs incorporated all the comments from the TLC, SMC, IAC and FAWG. The final SLOs were then resubmitted to the TLC, SMC and IAC in turn for final endorsement.

On successful completion of this specialisation, graduates will be able to:

1. Show mastery in the enabling sciences (maths, chemistry, physics, sustainability, and ecology) that underpin Environmental Engineering.
2. Demonstrate mastery in Environmental Engineering specialist technical knowledge such as: sustainability assessment, regulatory and environmental frameworks, thermodynamics and contaminant transport, water treatment and resources management, hydrology/hydraulics, wastewater and solid waste management and the intersection of human activities with the preservation and utilisation of the biosphere and its ecological functions, now and in the future under climate change.
3. Source, critically evaluate and apply current research and/or industry best practice to solve complex problems in Environmental Engineering.
4. Select and use appropriate analytical and computational tools as well as data literacy and analysis to analyse complex problems in Environmental Engineering.
5. Design, critique and implement innovative and sustainable engineering solutions and systems in Environmental Engineering.
6. Lead, manage, and integrate Environmental Engineering projects, individually or as part of a team, in a systematic and professional manner.
7. Apply nuanced professional judgement that contributes to the ethical and sustainable practice of Environmental Engineering.
8. Communicate and present professionally and effectively within and outside of the field of Environmental Engineering.

The discipline-specific technical knowledge and application skills embedded in this program ensures the attainment of the Engineers Australia Stage 1 competencies through a systematic alignment of Course Learning Outcomes, Specialisation Learning outcomes, Program Learning Outcomes and EA Professional competencies Stage 1. Details of this are provided on Section 6 of this document.

4. Continuous Improvement

The Head of School and the Deputy Head (Education), have the overall responsibility for the management of the undergraduate and postgraduate coursework programs within the School. The Teaching and Learning Committee of the School consists of academic staff members, teaching support assistants, members of the undergraduate and postgraduate student societies and a representative from the student nucleus. The committee meets monthly to discuss coordination of teaching, program review, designing new courses and revision of existing courses, course organisation and administration, students' feedback on courses, etc. The undergraduate and postgraduate student society representatives provide a student voice and present focus group feedback each term.

Proposals for new courses or course revisions relating to a particular discipline are born out of discussion among all staff in that discipline, as well as relevant industry representatives. New proposals for both undergraduate and postgraduate elective courses are typically driven by discipline-specific academic staff and motivated by current industry or research trends. Course changes are first discussed at the TLC and then at the School level during School Management Committee meetings.

To ensure program design is informed by ongoing evaluation of practice, industry needs, and future demand, the School draws on regular input from the Industry Advisory Committee (IAC) and engagement with Industry Partners. The School has active partnerships with industry organisations that provide regular input on current practice and workforce needs, including through engagement with academic staff and guest lectures. In addition, as Australia's top-ranked civil engineering school, many courses are taught by academics who lead internationally recognised research programs. This leadership, together with strong industry links, keeps teaching research-informed and up to date, with new methods and tools translated into course content. The School also keeps a watch on updates to relevant standards and guidelines and refreshes teaching software in computer labs through annual licensing reviews, so students can learn and use current industry-standard tools.

5. Review Process

UNSW's Academic Offering Review and Monitoring Procedure outlines a structured approach to maintaining the quality and relevance of academic programs and courses. It includes both program-level and course-level review processes, with defined responsibilities and timelines.

Program Monitoring is conducted annually for all programs and specialisations. A comprehensive program review must occur at least once every five years for accredited programs, and every seven years for others. These reviews include a self-evaluation report (SER), review panel, review event, and a formal response with an implementation plan. Oversight is provided by the Academic Board and University Academic Quality Committee (UAQC), with input from Faculty Education Committees and Deans.

Course Review within UNSW Engineering is managed through a two-tiered process: Routine Course Review and Comprehensive Course Review. Routine reviews are conducted at the end of each term by Schools, using data such as enrolment, assessment outcomes, academic integrity issues, WAM differences, and student feedback (myExperience). Courses flagged through this process are added to the Comprehensive Course Review roster.

Comprehensive Course Reviews are detailed evaluations led by the Course Convenor in collaboration with a Faculty Educational Developer, Nexus Fellow, or Senior Academic. These reviews assess course design, pedagogy, alignment with learning outcomes, and feedback mechanisms. Outcomes are documented in a Course Development Plan and an Evaluation Report following the next course delivery. Schools must review at least 10% of their courses annually.

Stakeholder involvement spans multiple levels, including the Academic Board, UAQC, Faculty and School committees, Course Convenors, and external contributors such as students and professional bodies.

Frequency of updates includes termly course reviews, annual program monitoring, and five-yearly comprehensive reviews for accredited programs.

6. Curriculum Mapping

A comprehensive curriculum mapping exercise has been carried out for the CVENBH Environmental Engineering specialisation of the 3707 Bachelor of Engineering (Honours) program at UNSW. This mapping demonstrates systematic alignment across all levels of learning outcomes and ensures the specialisation meets Engineers Australia Stage 1 Graduate Competencies.

Table 1 provides the alignment mapping between the specialisation learning outcomes and the Engineers Australia Stage 1 Competencies. Table 2 provides the alignment mapping between the Specialisation Learning Outcomes and each of the Courses. Table 3 provides the alignment between each assessment to the course learning outcomes.

CLO to SLO mapping (Table 2) shows that CVENBH specialisation demonstrates strong coverage in SLO 1 (enabling sciences in mathematics, chemistry, physics, sustainability, and ecology), SLO 2 (specialist technical knowledge in environmental engineering), and SLO 4 (analytical and computational tools).

SLO 1 coverage is concentrated primarily in Level 1 and Level 2 courses, where students develop mastery in enabling sciences. First-year courses such as BIOS1301, CVEN1701, CHEM1011/1811, MATH1131/1141, and PHYS1121/1131 establish foundational knowledge in ecology, sustainability, chemistry, mathematics, and physics. Second-year courses like CEIC2009, CVEN2701, and ENGG2500 further develop this foundation by introducing material and energy balances, water and atmospheric chemistry, and fluid mechanics principles that support environmental engineering applications.

SLO 2 demonstrates progression from introduction in Level 2 courses to proficiency in Level 3 and Level 4 courses. Core courses such as CVEN3701 (Environmental Frameworks, Law and Economics), CVEN3702 (Waste Management), CVEN3501 (Water Resources Engineering), and CVEN3502 (Water and Wastewater Engineering) develop specialist technical knowledge in key environmental engineering areas. Advanced electives in Level 4, including courses such as CVEN4504 (Advanced Water and Wastewater Treatment), CVEN4703 (Advanced Water Quality Principles), CVEN4706 (Air Quality and Pollution), and GSOE9740 (Industrial Ecology and Sustainable Engineering), enable students to achieve proficiency in specialised areas aligned with their career interests.

SLO 5 (design, critique, and implement sustainable engineering solutions) shows clear progression through the curriculum as well. Students have their first experience designing in DESN1000 (Introduction to Engineering Design and Innovation) in Level 1, develop these skills through DESN2000 (Engineering Design and Professional Practice) in Level 2, and progress to proficient application in Level 3 courses such as CVEN3501, CVEN3402 (Transport Engineering and Environmental Sustainability), and CVEN3702. The capstone experience in Level 4, through either the Thesis sequence (CVEN4050/4051 or CVEN4951/4952/4953) as well as capstone CVEN4701 (Planning Sustainable Infrastructure), demonstrates proficient capability in designing and implementing innovative environmental engineering solutions.

SLO 6 (project management) and SLO 7 (professional judgement) receive more selective coverage. These capabilities are explicitly developed in CVEN3101, DESN2000, and the capstone thesis courses.

SLO 3 (research and industry best practice) demonstrates progressive development from Level 2 onwards, with particular emphasis in Level 3 and Level 4 courses where students engage with current research literature, industry case studies, and emerging technologies. The thesis courses in final year require students to demonstrate proficiency by conducting independent literature reviews and applying research methodologies to solve complex environmental engineering problems.

All assessment tasks are explicitly mapped to Course Learning Outcomes (CLOs), which in turn align with Specialisation Learning Outcomes (SLOs) and Program Learning Outcomes (PLOs). This alignment ensures that assessments not only measure academic achievement but also contribute to verifying graduate capabilities at the program level, supporting continuous curriculum improvement and accreditation standards.

Table 1: Mapping of the specialisation learning outcomes to the Engineers Australia Stage 1 Competencies

SLO/PLO	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12	PLO13	PLO14	PLO15	PLO16
1. Show mastery in the enabling sciences (maths, chemistry, physics, sustainability, and ecology) that underpin Environmental Engineering.	x	x														
2. Demonstrate mastery in Environmental Engineering specialist technical knowledge such as: sustainability assessment, regulatory and environmental frameworks, thermodynamics and contaminant transport, water treatment and resources management, hydrology/hydraulics, wastewater and solid waste management and the intersection of human activities with the preservation and utilisation of the biosphere and its ecological functions, now and in the future under climate change.			x		x											
3. Source, critically evaluate and apply current research and/or industry best practice to solve complex problems in Environmental Engineering				x												
4. Select and use appropriate analytical and computational tools as well as data literacy and analysis to analyse complex problems in Environmental Engineering					x		x	x						x		
5. Design, critique and implement innovative and sustainable engineering solutions and systems in Environmental Engineering									x				x			
6. Lead manage, and integrate Environmental Engineering projects, individually or as part of a team, in a systematic and professional manner										x				x		x
7. Apply nuanced professional judgement that contributes to the ethical and sustainable practice of Environmental Engineering					x	x					x				x	
8. Communicate and present professionally and effectively within and outside of the field of Environmental Engineering												x				x

Table 2: Mapping of courses to the specialisation learning outcomes

	1. Show mastery in the enabling sciences (maths, chemistry, physics, sustainability, and ecology) that underpin Environmental Engineering.	2. Demonstrate mastery in Environmental Engineering specialist technical knowledge such as: sustainability assessment, regulatory and environmental frameworks, thermodynamics and contaminant transport, water treatment and resources management, hydrology/h	3. Source, critically evaluate and apply current research and/or industry best practice to solve complex problems in Environmental Engineering	4. Select and use appropriate analytical and computational tools as well as data literacy and analysis to analyse complex problems in Environmental Engineering	5. Design, critique and implement innovative and sustainable engineering solutions and systems in Environmental Engineering	6. Lead manage, and integrate Environmental Engineering projects, individually or as part of a team, in a systematic and professional manner	7. Apply nuanced professional judgement that contributes to the ethical and sustainable practice of Environmental Engineering	8. Communicate and present professionally and effectively within and outside of the field of Environmental Engineering
Level 1 Core Courses								
CHEM1011	Introduced	Introduced	no alignment	Introduced	no alignment	no alignment	no alignment	Introduced
CHEM1811	Introduced	Introduced	no alignment	Introduced	no alignment	no alignment	no alignment	Introduced
DESN1000	Introduced	Introduced	Developed	Developed	Developed	Introduced	Introduced	Developed

ENGG1811	no alignment	no alignment	no alignment	Introduced	no alignment	no alignment	no alignment	no alignment
MATH1131	Introduced	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment
MATH1141	Introduced	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment
MATH1231	Introduced	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment
MATH1241	Introduced	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment
PHYS1121	Introduced	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment
PHYS1131	Introduced	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment
BIOS1301	Introduced	Introduced	no alignment	Introduced	no alignment	Introduced	no alignment	Introduced
CVEN1701	Introduced	Introduced	Introduced	Introduced	Introduced	no alignment	Introduced	Introduced
Level 2 Core Courses								
CVEN2002	Introduced	no alignment	Introduced	Developed	Introduced	no alignment	no alignment	no alignment
DESN2000	no alignment	Developed	Developed	Developed	Developed	Developed	Developed	Developed
ENGG2500	Developed	Developed	no alignment	Introduced	no alignment	Introduced	no alignment	Introduced
MATH2018	Developed	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment
MATH2019	Developed	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment	no alignment
CEIC2009	Introduced	Developed	no alignment	Introduced	no alignment	no alignment	no alignment	no alignment
CVEN2701	Developed	Introduced	Introduced	Introduced	no alignment	no alignment	Introduced	Introduced
Level 3 Core Courses								
CVEN3101	Developed	Developed	Developed	no alignment	Proficient	Developed	Developed	no alignment
CVEN3202	Proficient	Proficient	Developed	Proficient	Introduced	Introduced	Introduced	Introduced
CVEN3203	Introduced	Introduced	Introduced	Developed	no alignment	no alignment	no alignment	Introduced
CVEN3501	Developed	Developed	Developed	Developed	Developed	Developed	Developed	Developed
CVEN3502	Developed	Developed	Introduced	Introduced	no alignment	no alignment	no alignment	no alignment
CVEN3701	no alignment	Proficient	Proficient	Proficient	Developed	Proficient	Proficient	Developed
CVEN3402	Developed	Developed	Developed	Proficient	Proficient	Proficient	Proficient	Proficient
CVEN3702	Developed	Proficient	Proficient	Introduced	Proficient	Introduced	Introduced	Developed
Level 4 Core Courses								
CVEN4701	no alignment	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient
Thesis Courses								
CVEN4050	no alignment	Proficient	Proficient	Proficient	Proficient	no alignment	Proficient	Proficient
CVEN4051	no alignment	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient
CVEN4951	no alignment	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient

CVEN4952	no alignment	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient
CVEN4953	no alignment	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient
CVEN4961	no alignment	Proficient	Proficient	Proficient	Proficient	Proficient	no alignment	Proficient
CVEN4962	no alignment	Proficient	Proficient	Proficient	Proficient	Proficient	no alignment	Proficient
Discipline Electives								
CVEN4103	no alignment	Proficient	Proficient	Developed	Developed	Proficient	Developed	Developed
CVEN4104	Developed	Developed	Proficient	Developed	Proficient	Developed	Proficient	Proficient
CVEN4201	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient	no alignment	Proficient
CVEN4202	Proficient	Proficient	Proficient	Proficient	Proficient	Developed	Proficient	Proficient
CVEN4204	Proficient	Proficient	Proficient	Proficient	Proficient	no alignment	Proficient	Proficient
CVEN4402	Proficient	Proficient	Proficient	Proficient	Proficient	no alignment	Proficient	no alignment
CVEN4404	no alignment	Developed	Developed	Developed	Developed	Developed	Introduced	Introduced
CVEN4405	no alignment	Developed	Proficient	Developed	Developed	Proficient	Proficient	Proficient
CVEN4503	Proficient	Proficient	Proficient	Proficient	Developed	Introduced	Developed	Developed
CVEN4504	Proficient	Proficient	Proficient	Proficient	Developed	no alignment	no alignment	no alignment
CVEN4507	Proficient	Proficient	Proficient	Proficient	Proficient	no alignment	Developed	no alignment
CVEN4703	Developed	Developed	Proficient	Developed	Developed	Proficient	Proficient	Proficient
CVEN4705	no alignment	Proficient	Developed	Proficient	no alignment	no alignment	Proficient	Developed
CVEN4706	no alignment	Proficient	Introduced	Developed	no alignment	no alignment	Proficient	Proficient
CVEN4800								
CVEN9405	Proficient	Proficient	Proficient	Developed	Developed	Developed	Introduced	Proficient
CVEN9415	no alignment	Developed	Developed	Proficient	Developed	Developed	no alignment	no alignment
CVEN9612	Proficient	Proficient	Proficient	Proficient	Proficient	no alignment	Developed	Developed
CVEN9620	Proficient	Proficient	Proficient	Proficient	Proficient	Developed	Proficient	Proficient
CVEN9640	Introduced	Introduced	Developed	Developed	Developed	no alignment	Developed	Developed
CVEN9881	Developed	Developed	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient
ENGG3001	no alignment	Developed	Developed	Developed	Introduced	Developed	Developed	Proficient
ENGG3741	Developed	Developed	no alignment	no alignment	no alignment	no alignment	Introduced	Introduced
ENGG4060								
ENGG4102	Developed	Developed	Proficient	Developed	Developed	Developed	Developed	Developed
ENGG4103	Developed	Developed	Developed	Developed	Developed	Developed	Developed	Developed
GMAT3220	no alignment	Developed	Developed	Developed	Developed	Developed	no alignment	Developed

GMAT9600	Developed	Developed	Introduced	Introduced	Developed	no alignment	no alignment	no alignment
GMAT9606								
GSOE9740	Developed	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient	Proficient
Practice Electives								
ENGG2600	no alignment	Developed	Developed	Developed	Developed	Developed	Developed	Developed
ENGG3600	no alignment	Developed	Developed	Developed	Developed	Developed	Developed	Developed
ENGG4600	no alignment	Developed	Developed	Developed	Developed	Developed	Developed	Developed

7. Assessments

A complete overview of the assessment types is provided in Figures 1-3. Figure 1 shows assessment distribution for all specialisation courses, while Figures 2 and 3 show assessment distribution for core and elective courses, respectively.

Analysis of assessment distribution in core courses (Figure 2) reveals that majority of assessments are exams (48.86% combined of tests and examinations), followed by assignments, 22.14% and similar distribution between reports, presentations and lab-work. As is typical of many specialisations, early courses are content-driven, and the assessments reflect a need to demonstrate individual learning in tests or examinations. Laboratory work constitutes 6.87% of core assessment, providing hands-on experience in experimental methods, data collection, and scientific reporting essential to environmental engineering practice. Reports (6.11%) and presentations (6.87%) develop professional communication skills, while projects (2.29%) introduce students to team-based enquiry and design thinking.

Analysis of assessment distribution in elective courses (Figure 3) shows distinct patterns that reflect opportunities for specialisation and advanced application in different environmental engineering areas. Exams (combined 41.32% between tests and examinations) comprise the largest proportion, followed by assignments at 38.84%. This increase in assignment-based assessment in electives enables students to engage deeply with specialised topics through research, design tasks, and case study analysis aligned with their career interests. The elective portfolio includes greater diversity in assessment approaches, with presentations accounting for 7.44%, essays (1.65%), and projects (1.65%). Laboratory work (1.65%) and portfolio assessments (0.83%) appear in specialised courses where hands-on technical skills or cumulative work products are emphasised.

Enquiry-based learning is central to the specialisation's capstone experience in Level 4. The thesis pathway (CVEN4050/4051 or CVEN4951/4952/4953) scaffolds independent research and professional work, with students demonstrating progressive capability through draft chapters, literature reviews, methodology reports, and final thesis documents. These courses provide extensive formative feedback through regular supervisor meetings, progress reports, and milestone reviews that enable students to refine their technical work, critical thinking, and communication before final assessment. Capstone course CVEN4701 (Planning Sustainable Infrastructure) similarly employ project-based assessment with formative feedback cycles, requiring students to apply systems thinking and sustainability principles to real-world infrastructure challenges.

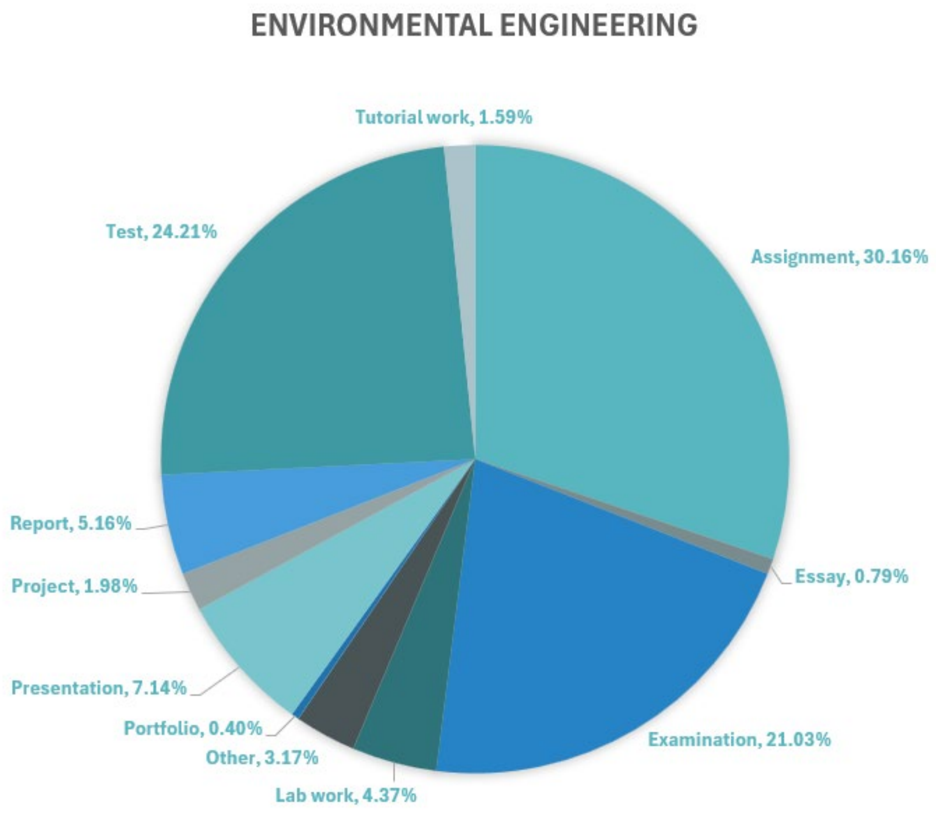
Reflective practice and peer assessment are embedded throughout the program to develop metacognitive awareness and critical evaluation skills. Design courses (DESN1000, DESN2000) require students to maintain design journals documenting their learning process, design iterations, team collaboration experiences, and personal growth in professional capabilities. Selected courses employ peer assessment and peer review activities, particularly in team projects and presentations, enabling students to develop evaluative judgement and appreciate diverse approaches to solving complex environmental engineering problems. Thesis courses (CVEN4050/4051, CVEN4951/4952/4953) incorporate reflective components where students critically evaluate their methodological decisions and the broader implications of their work. These reflective and peer-based activities help students recognize their capability development and build the self-directed learning habits essential for lifelong professional practice.

The School has implemented several processes to ensure that academic integrity is maintained in assessments:

- All exam papers are reviewed by another academic. The reviewer will also be given the rubric and worked solution. When a paper is written by a new academic it will be reviewed by a professor or A/Prof to ensure standards are being maintained. Admin staff follow up to ensure all papers have been reviewed.

- Reports are submitted using TurnItIn, which ensures that students are not plagiarising or colluding.
- Academics provide rubrics and worked solutions to markers. In this case the academic will re-mark a sample of the reports or exam papers to ensure the rubric is being used correctly.
- Important works, such as Masters Projects, will have two markers to ensure consistency.
- All courses in the school should have at least one important assessment secured against AI, such as an invigilated exam, in-person presentation or observed activity for assurance of learning in the age of generative AI.
- Where online assessments are used, the School has invested heavily in online assessment platforms such as Inspera and STACK, which enable advanced computational questions and allow programming of mathematical models that can be individualised through randomisation of input values. Since the programming is time-intensive, the School has employed a team of programmers to code the questions as specified in detail by the academics.
- Local students living more than 100 kms from the Kensington campus can enrol in certain courses offering distance/online delivery. These students can apply to complete an exam remotely, with supervision by a qualified engineer managed by the School according to a set process. This is important for assuring academic integrity for local postgraduate students who may be located interstate and working part-time while completing their advanced qualifications.

The School allows the use of generative AI in coursework only to the extent explicitly stated in each assessment's instructions. Where AI is allowed (e.g., limited planning or ideation, or language polishing), students must transparently acknowledge and reference any AI assistance. Assessment design prioritises authentic evidence of individual learning, so some assessments, including invigilated exams and quizzes as well as presentations, prohibit AI entirely, while others may allow constrained use with proper attribution. These policies align with UNSW's AI teaching guidelines and assessment guidance for ethical, responsible use (for details see https://www.teaching.unsw.edu.au/ai/guidelines).



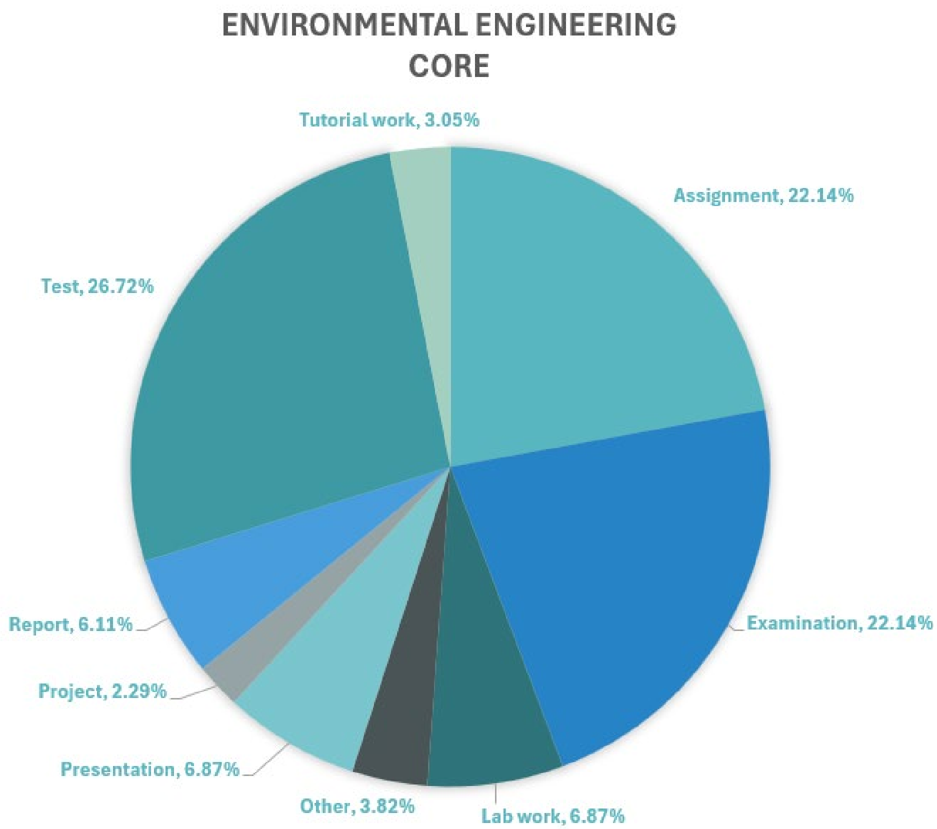


Figure 1: Percentage of assessment types used within the specialisation for both core and electives

Figure 2: Percentage of assessment types used within the core of the specialisation.

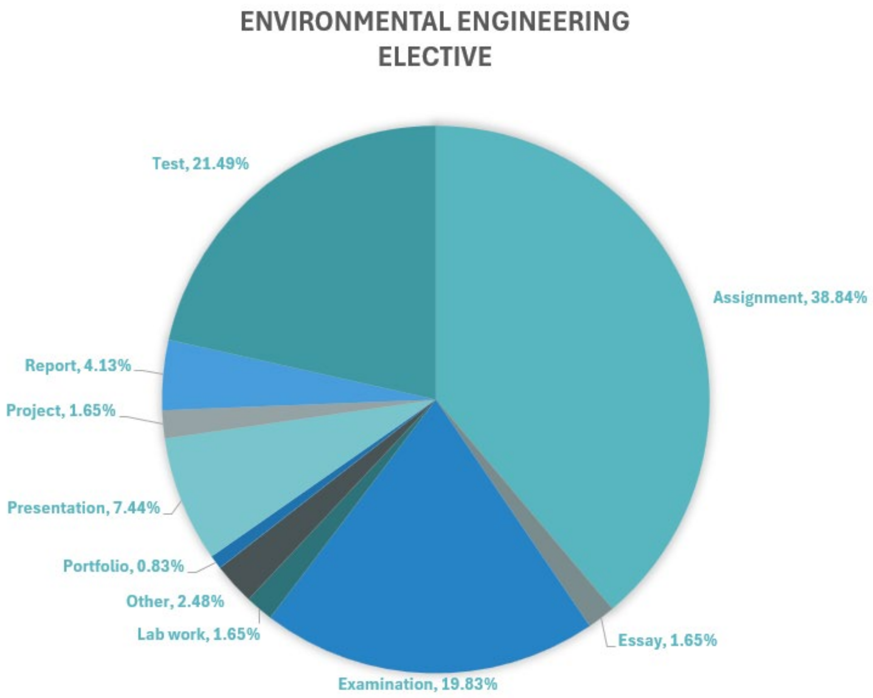


Figure 3: Percentage of assessment types used within the electives of the specialisation.

8. Specialisation Progression Plan

The structure of the CVENBH specialisation ensures that graduate-level capabilities are developed through science and programming courses in Year 1, core courses in Years 2 and 3, and specialised knowledge in Environmental assessment, Water engineering, Wastewater engineering, Waste Management, Engineering Construction and Management, and Transport Engineering, in Year 4. This scaffolding approach allows students to reflect on their learning, enabling them to self-assess and develop graduate capabilities aligned with their interests or career aspirations.

To this end, students are supported in monitoring and adjusting their study progress through UNSW's official advising channels. Program information and enrolment support are provided through The Nucleus: Student Hub. Specialisation-specific level support is provided by designated year advisors who are appointed by the School. A study plan specific to each term entry and a progression checklist is provided to the student. In addition, the myPlan online tool combines the study plans progression checklist into a single interactive tool that allows students and staff to plan courses, view prerequisites, and track progress toward graduation in real time.

Each term, students use myPlan to confirm which requirements they have completed, which remain, and which prerequisite sequences apply, which supports self-checking of readiness for later-stage courses and informed elective selection. This is reinforced by term-by-term communications from the specialisation coordinator and by course coordinators clarifying how courses link across the program, which helps students to reflect on their results and feedback against course learning outcomes and graduate capabilities and to adjust their plan where needed.

Students can track their progression through the "myPlan" checker tool.

myPlan | Current Students - UNSW Sydney

A progression checklist and/or study plan is also available for students for the single degree and the double degree offerings.

Progression checksheets & study plans | Engineering - UNSW Sydney